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ABSTRACT

This report evaluates a program designed to supplement the basic educational services, provided by New York City's Division of Special Education, for Hispanic handicapped students with limited English proficiency. In 1980-81, the program served 129 students in nine public schools (seven elementary and two intermediate) and one private school in the Bronx, New York. Services provided included direct individualized instruction, resource assistance, staff development, and parent training for greater involvement. The program was evaluated using data from pupil achievement measures, teacher attitude and observation scales, and staff interviews and classroom observations. Based on the findings, it is concluded that (1) the program provided an effective and comprehensive system of educational services that developed the instructional skills of the staff and the academic skills of the students; (2) the proposed criteria for mathematics, oral-English proficiency, social studies, science, and English reading were met; (3) all classroom teachers manifested a positive attitude toward program services; (4) program-parent communication was maintained through parent workshops and home visits; and (5) a program guide curriculum in reading, mathematics, social studies, and science was developed for handicapped students. Recommendations include continued emphasis on individualization of instruction, the development of additional curricula and instructional materials for bilingual special education, systematization of parent-involvement activities, and more emphasis on the transition from Spanish to English in language instruction. (AOS)

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ANNUAL EVALUATION REPORT
E.S.E.A. TITLE VII
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BRONX MULTIDISCIPLINE
SPECIAL EDUCATION
BILINGUAL PROGRAM
1980-81

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A SUMMARY OF THE EVALUATION OF THE 1980-81 E.S.E.A. TITLE VII BRONX MULTIDISCIPLINE SPECIAL EDUCATION BILINGUAL PROGRAM

This program supplemented the basic educational services provided by the Division of Special Education for Hispanic handicapped students with limited English proficiency (L.E.P.) in the Bronx. Program services included direct individualized instruction, resource assistance, staff development, and parent training and involvement. During the 1980-81 school year, 129 students were served in nine public schools (seven elementary and two intermediate) and one private school.

The analyses of data from pupil achievement measures, teacher attitude and observation scales, and staff interviews and classroom observations indicated that, as reported last year, the Bronx Multidiscipline Special Education Bilingual Program continued to provide an effective and comprehensive system of educational services that developed the instructional skills of the staff and the academic skills of the students.

Pupil achievement data indicated that all student program objectives were attained. The proposed criteria were met in mathematics, oral-English proficiency, social studies, science, and English reading. In addition, all classroom teachers manifested a positive attitude toward program services, particularly teacher training, and demonstrated proficiency in the skills and concepts focussed upon in teacher-training workshops. Extensive program-parent communication was maintained through parent workshops, home visits by the project coordinator, teachers, and paraprofessionals. An additional noteworthy achievement was the development of an original program guide curriculum in reading, mathematics, social studies, and science for handicapped L.E.P. students.

The findings of this evaluation led to recommendations for (1) continued emphasis on individualization of instruction, (2) the development of additional curricula and instructional materials for bilingual special education, (3) greater attention to the transition from Spanish to English instruction in literacy development and the assessment of expressive language development, and (4) the systematization of parent-involvement activities.

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I. INTRODUCTION

This report presents the evaluation of the second annual cycle of the E.S.E.A. Title VII Bronx Multidiscipline Special Education Bilingual Program (hereafter referred to as the Bronx Multidiscipline Program). This program supplemented the basic educational services provided by the Division of Special Education for Hispanic handicapped students with limited English proficiency (L.E.P.) in the Bronx. Program services included direct individualized instruction, resource assistance, staff development, and parent training and involvement. This project was evaluated by the Office of Educational Evaluation (O.E.E.) through the collection and analysis of data from (1) pupil achievement tests, (2) program records of parent participation and staff training, (3) teacher attitude and observation scales, and (4) O.E.E. interviews and observations concerning the level and quality of program implementation. The following chapters present the findings of the evaluation. Chapter II provides a description of the program and the evaluation of program implementation; Chapter III addresses the level of attainment of program objectives; and Chapter IV presents conclusions and recommendations.

II. EVALUATION OF PROGRAM IMPLEMENTATION

DESCRIPTION

The Bronx Multidiscipline Program was designed to supplement the basic educational program for Spanish-speaking L.E.P. students with a variety of handicaps in the Bronx Special Education Region. During the 1980-81 school year, the program served 129 students in nine public schools (seven elementary and two intermediate) and one private school.

Approximately one-half of the students were educable mentally retarded and one-half were learning disabled; all were served in self-contained classes with an average register of 12 students. The students, who ranged in age from seven to 16 years with a mean of 11.5 and a mode of ten, were referred to the program by School-Based Support Teams.

The program was administered by the regional coordinator of bilingual special education in the Bronx and was staffed by: one resource teacher who was responsible for the training of paraprofessionals and classroom teachers and parent involvement; four paraprofessionals who assisted the classroom teachers in the individualization of instruction and materials development; and two family assistants who served as liaisons between the students and their families and social, medical, and educational agencies. In addition to staff, the grant allocated funds for curriculum development and instructional materials for teacher and parent training.

The pupil-centered objectives of the program were focused upon gains in oral-English proficiency, mathematics, science, social studies, and English reading. Other program objectives were to promote (1) the mastery of staff-development objectives by classroom teachers and paraprofessionals, (2) the

concern of parents for the educational problems of handicapped children, and (3) a favorable attitude toward the program by classroom teachers and paraprofessionals.

The following sections present the findings of interviews and observations by the O.E.E. consultant to evaluate each of the four major program components: direct pupil instruction, resource services, staff development, and parent involvement.

DIRECT PUPIL INSTRUCTION

Since the target population was heterogeneous in age and cognitive/academic and lingusitic proficiency, individualization of instruction was integral. One method for individualizing instruction practiced at several classroom sites was the Workshop Way. Teachers using this approach had been specially trained and demonstrated proficiency in its administration. This approach allowed students to pace themselves in performing a series of up to seventeen tasks or activities during each week.

Although the Workshop-Way approach was observed to be most effective, it was noted that its success required careful and comprehensive teacher training. In addition, interviews revealed that the students required several weeks to adjust to the approach. However, this and other approaches such as conventional learning centers made it possible for the teacher or paraprofessional to assist those children requiring individual tutorial.

Observations revealed that instruction was based on the prior diagnosis of each child's linguistic, cognitive, academic, and social competencies. The teachers observed maintained program-developed student-academic-profile sheets in addition to individual educational plans. These were checklists consisting

of competencies in reading, cognition, math, and functional living skills and provided an indication of whether each item had been mastered in English and/or Spanish and the date of mastery. These checklists offered a quick reference for the teacher to plan, organize, and monitor the desired student outcomes during the year.

All classroom teachers demonstrated excellent management skills. The lessons were motivated, paced, and executed in accordance with the individual needs of the students. Disruptions by acting-out students were quickly managed in a manner that kept the learning atmosphere consistent and stable. The teachers employed a wide array of activities, materials, and instructional techniques designed to stimulate a variety of modalities. The materials and resources provided by the project included various texts, program-developed curriculum materials, and equipment such as math computers and Bell and Howell Spelling Masters.

Obervations indicated that instruction was highly individualized, employing a diagnostic-prescriptive methodology. Interviews with classroom staff revealed that the staff-development workshops and on-site demonstrations and consultations contributed to their demonstrated instructional expertise. Close contact and regular communication between the project and classroom personnel appeared to bolster morale as well as professional skills. Moreover, the classroom teachers were trained and experienced in both bilingual and special education and were observed to effectively integrate the methodological approaches of both disciplines.

Enrichment lessons focussing upon Hispanic culture promoted a positive bicultural, bilingual identity and self concept. These activities were

effectively implemented with the aid of a talented bilingual paraprofessional skilled in art-enrichment activities who visited each classroom periodically.

Although pupil instruction was enhanced by project training, the above-mentioned heterogeneity in age and cognitive/academic level of the within-class population made individualization of instruction difficult. Although the classroom teachers and paraprofessionals demonstrated proficiency in grouping students for individualized instruction, the within-class disparity observed in age, ability, and achievement made it difficult to provide all students with an optimal level and intensity of instruction.

RESOURCE SERVICES

A variety of resources were tapped for consultation, information, and materials including the State Education Department's Bureau of Bilingual Education, New York City Public Schools' Office of Bilingual Education, Aspira of America, and local colleges and universities. In addition, the program made extensive use of the varied services of the Bronx region of the Division of Special Education including supervisors, psychologists, social workers, paraprofessionals, and specialists such as adaptive-physical-education teachers.

The itinerant paraprofessional mentioned above who was trained in art enrichment proved a valuable resource to the program by involving students in highly-creative and motivating projects, such as the construction of life-size papier-mache pup-pets, and the development of visual materials for classroom lessons.

A notable achievement of the program was the development of curriculum and instructional materials for bilingual handicapped students. Many evaluations of bilingual special-education programs have lamented the paucity of

interesting, age-appropriate instructional materials and curricula and, consequently, have recommended local attention to curriculum and materials development. Consistent with these evaluations, the Bronx Multidiscipline Program has developed a Spanish bilingual reading text for handicapped students, entitled The Snow, and a program guide including sequentially-developed curricula in reading, language art, mathematics, social studies, and science and approaches to classroom mangement. Both of these products fulfill a pressing need and represent important advancements in the field. The development of additional materials and curricula ought to be encouraged.

STAFF DEVELOPMENT

Staff training was principally provided by the project coordinator through workshops and on-site demonstration lessons. Training focused upon the individualization of instruction including the implementation of the program's curriculum through a diagnostic-prescriptive approach.

The project coordinator was observed to monitor staff development closely through the formative assessment of class achievement. The progress of project classes and students in the mastery of reading and mathematics skills was followed through the aggregation of data from the criterion-referenced Prescriptive Reading Inventory (P.R.I.) and Diagnostic Mathematics Inventory (D.M.I.). Classes in which student progress was lagging were targeted for in-depth investigation frequently leading to more intensive staff training. This system represented an effective state-of-the-art method of program management.

In addition to exhibiting effective and innovative staff-development and management, the program staff also demonstrated critical insights into key issues of bilingual special education. Two such issues concern the valid

and reliable measurement of language proficiency and the threshold for the transition from reading instruction in Spanish to English. These issues were topics for staff-training workshops and as indicated by the coordinator, will continue to be addressed both theoretically and empirically during future program cycles.

PARENT EDUCATION AND INVOLVEMENT

Parent involvement for awareness and training was promoted through the program's Parent Advisory Council, individual educational planning and teacher conferences, parent workshops, and home visits.

The goals and concerns of the program were discussed at meetings of the Parent Advisory Council and the staff received feedback concerning the attitudes of the parents toward the program and its effects upon the development and performance of students at home.

The project coordinator personally visited the parents of many students at home to discuss methods for assisting the academic and social development of their children. Family assistants also made home visits and maintained close contact with the parents.

During interviews, program staff emphasized the educational significance of parent involvement. One teacher noted that the children whose parents were in contact with him showed better social and academic progress than those whose parents were not involved. Another teacher visited the homes of every student in her class.

III. EVALUATION OF THE ATTAINMENT OF PROGRAM OBJECTIVES

The Bronx Multidiscipline Project was designed to attain nine objectives: five related to pupil achievement, two concerned staff attitudes and development, and two for parent participation. The following sections present the objectives of the program, the methods of evaluation, and the findings preceeded by data on pupil attendance.

ATTENDANCE

Data were submitted on O.E.E. data-retrieval forms for 128 program students. Two of these students were admitted late and four were discharged early. Thus, complete data were reported for 122 students (95.3 percent).

The mean number of days of program attendance for the total population was 139.5 (S.D. = 33.9) out of a total of 185 instructional days. The median and the mode were 150 and 155 days, respectively. The mean percentage attendance was 80 percent.

OBJECTIVE 1. MASTERY OF MATHEMATICS SKILLS

The mathematics objective of the Bronx Multidiscipline Program stated that by June 1981, 80 percent of the participating students will have demonstrated mastery of 70 percent of the identified math objectives in which they were deficient in September 1980. The objective was measured through ongoing administration of the Diagnostic Mathematics Inventory (D.M.I.).

Baseline data were gathered for program students on the D.M.I. during September 1980. These data were used to diagnose each student's strengths and weaknesses in mathematics and to develop short-term objectives to remediate the observed deficiencies. After individual instruction for each

short-term objective the students were posttested on the relevant items of the D.M.I. to ascertain mastery. These data were reported for analysis during June 1981.

Table 1 presents the frequency distribution of the percentage of short-term math objectives mastered by the target students. The percentage of mastery ranged from a minimum of less than 39 percent for five students (4.2 percent of those for whom those data were reported) to a maximum of 100 percent for 33 students (27.7 percent). The mean percentage of mastery was 86.6 and the median was 77.4. The multiple criterion for this objective was a percentage of mastery of at least 70 percent by 80 percent of the population. Inspection of Table 1 indicates that the mastery criterion was attained by 61.2 percent of the students.

Although the program did not attain the criterion for the mathematics objective (measured in percentage of mastery) the students demonstrated considerable achievement measured in the absolute number of D.M.I. objectives mastered. (See Table 2.) The total number of D.M.I. objectives mastered ranged from a minimum of two to a maximum of nine. Almost 74 percent of the students mastered at least five objectives; almost 92 percent mastered at least four. The mean was 5.6, the median 6.2, and the mode six.

Most of the objectives that were mastered were in the domain of mathematical operations and basic computation including the multiplication, subtraction, and addition of whole numbers. Mastery was also frequently observed in the preoperational areas of counting and the concept of fractions. The students demonstrated less success in the mastery of division.

TABLE 1

FREQUENCY DISTRIBUTION OF THE PERCENTAGE OF MASTERY OF MATHEMATICS OBJECTIVES BY PROGRAM STUDENTS[a]

Percentage of Mastery[b]	Number of Students	Relative Percent	Cumulative Percent
100	33	27.7	27.7
90-99	11	9.2	36.9
80-89	11	9.2	46.1
70-79	18	15.1	61.2
60-69	17	14.2	75.4
50-59	12	10.0	85.4
40-49	12	10.0	95.4
<39	5	4.2	99.6[c]
	119		

[a]Measured by the Diagnostic Mathematics Inventory

[b]The percentage of short-term mathematics objectives that were remediated and mastered.

[c]Does not sum to 100 percent due to rounding error. Approximately 61 percent of the students mastered a minimum of 70 percent of the math skills in which they were remediated; the criterion of 80 percent of the students was not attained.

TABLE 2

FREQUENCY DISTRIBUTION OF THE
NUMBER OF MATH SKILLS
MASTERED BY PROGRAM
STUDENTS[a]

Number of Skills Mastered	Number of Students	Relative Percent	Cumulative Percent
9	1	0.8	0.8
8	11	9.0	9.8
7	18	14.8	24.6
6	41	33.6	58.2
5	19	15.6	73.8
4	22	18.0	91.8
3	9	7.4	99.2
2	1	0.8	100.0
	122		

[a]Measured by the Diagnostic Mathematics Inventory.

.More than one-half of the students tested mastered at least six new mathematics skills.

.Almost three-quarters mastered five new skills.

.All students mastered at least two new skills.

OBJECTIVE 2. IMPROVEMENT IN ORAL-ENGLISH PROFICIENCY

An objective of the program was that by June 1981, those students who were non-English dominant would show statistically significant improvement, at the .05 level, in oral proficiency in English. The objective was measured by a comparison of English-language samples taken during October 1980 and June 1981. The samples consisted of the students' oral productions in response to the presentation of pictorial stimuli that related to the program's curriculum. Stimuli were presented individually until five sentences were produced. The average sentence length of these productions was scored in T units by a language-proficiency expert. The mean pre- and posttest scores were compared through the application of a t test for correlated samples.

Table 3 presents the results of the comparison of mean pre- and posttest English-language-proficiency scores for the total sample. The mean pre- to posttest gain of 0.84 T units was statistically significant ($t = 19.1$, $df = 120$, $p<.01$). Accordingly, the objective was met.

OBJECTIVE 3. MASTERY OF SOCIAL STUDIES CONCEPTS

An objective of this program was that by June 1981, 80 percent of the program students would demonstrate mastery of 70 percent of the items on a program-developed test of social studies concepts. Table 4 presents a frequency distribution of scores on the social studies test. Of the 121 students for whom scores were obtained, all but three or 97.5 percent attained the 70-percent criterion. Thus, the program objective was met. The overall mean score was 74.9 percent with over one-third of the students scoring at least 80 percent.

TABLE 3

COMPARISON OF PRETEST AND POSTTEST ENGLISH LANGUAGE SAMPLES[a]

Test Session	Mean	S.D.[b]	$\bar{D}$[c]	N	t
Pretest	4.56	1.15	0.84	121	19.10**
Posttest	5.40	1.11			

**$p<.01$

[a]Scored in T units

[b]Standard deviation

[c]Mean pre- to posttest gain.

.The sample of 121 students showed a statistically significant increase in mean T-unit scores of pre- and posttest English-language samples.

TABLE 4

FREQUENCY DISTRIBUTION OF
SCORES ON PROJECT-DEVELOPED
SOCIAL STUDIES TEST

Score[a]	Number of Students	Relative Percent	Cumulative Percent
90-99	9	7.4	7.4
80-89	33	27.3	34.7
70-79	76	62.8	97.5
<70	3	2.5	100.0
	121		

[a]Percentage of items correct.

.More than 97 percent of the participating students scored 70 percent or better on the project-developed social studies test; the program objective was attained.

OBJECTIVE 4. MASTERY OF SCIENCE CONCEPTS

An objective of the program was that by June 1981, 80 percent of the students would demonstrate mastery of 70 percent of the items on a program-developed science test. Table 5 presents a frequency distribution of the science-test scores. Almost 96 percent of the 121 students tested passed the 70-percent criterion; only five students scored below 70 percent. Accordingly, the objective was attained. The mean test score was 75 percent with 38 percent of the students scoring at least 80 percent.

OBJECTIVE 5. GROWTH IN ENGLISH READING

The fifth pupil objective of the Bronx Multidiscipline Program proposed that by June 1981, 80 percent of the participating students would master at least four new objectives in English reading as measured by the Prescriptive Reading Inventory (P.R.I.). The P.R.I. is a criterion-referenced test consisting of items which measure specific skills in the areas of phonology, structural analysis, and comprehension. Baseline testing was performed in October 1980, with posttesting completed in May 1981.

Table 6 presents a frequency distribution of the number of reading objectives (skills) mastered by the target population. The number of new skills mastered ranged from a minimum of zero to a maximum of ten with a mean of 5.7, a median of 6.2, and a mode of six. The four-skill criterion was attained by 91.8 percent of the students, easily surpassing the goal of 80 percent. Indeed, more than 62 percent of the students mastered at least six reading skills. Accordingly, the objective was met.

TABLE 5

FREQUENCY DISTRIBUTION OF
SCORES ON PROJECT-DEVELOPED
SCIENCE TEST

Score[a]	Number of Students	Relative Percent	Cumulative Percent
90-99	10	8.3	8.3
80-89	36	29.7	38.0
70-79	70	57.9	95.9
<70	5	4.1	100.0
	121		

[a]Percentage of items correct.

.Almost 96 percent of the students scored at least 70 percent on the project-developed science test; the objective was attained.

TABLE 6

FREQUENCY DISTRIBUTION OF THE NUMBER OF READING SKILLS MASTERED BY PROGRAM STUDENTS[a]

Number of Skills Mastered	Number of Students	Relative Percent	Cumulative Percent
10	1	0.8	0.8
9	6	4.9	5.7
8	13	10.7	16.4
7	18	14.8	31.2
6	38	31.1	62.3
5	25	20.5	82.8
4	11	9.0	91.8
3	1	0.8	92.6
2	1	0.8	93.4
1	1	0.8	94.2
0	7	5.7	99.9[b]
	122		

[a]Measured by the Prescriptive Reading Inventory

[b]Does not sum to 100 percent due to rounding error.

.Almost 92 percent of the students mastered at least four new reading skills; the criterion was 80 percent. Thus, the English-reading objective was attained.

OBJECTIVE 6. ATTITUDE TOWARD THE PROGRAM

Staff training and resource services were provided to the teachers of the classes served by the program. Staff training focussed upon the individualization of instruction, parent involvement, resources, curriculum, and instructional materials and equipment. Staff development was designed to enhance the instructional skills of participating teachers, thereby improving the educational program for the target students. It was hypothesized that an effective program of staff development would result in a positive teacher attitude toward the program as manifested in responses to an appropriate questionnaire. Accordingly, an objective of the program was that 100 percent of the participating teachers would demonstrate favorable attitudes toward the program as measured by a locally-developed questionnaire.

A five-point Likert-type scale was developed consisting of five items that measured the staff perceptions of the program's impact upon their professional growth in the following areas: curriculum development; staff relations; parent involvement; supplementary instructional activities; and utilization of materials and equipment. The scale was administered to ten program teachers during May 1981. Analysis of these data revealed that all ten teachers either strongly agreed or agreed that the program enhanced their professional abilities in four of the above five areas. The results fell short of 100 percent agreement in only one area--parent involvement. While 80 percent (eight teachers) agreed (five of these strongly agreed) that the program enabled them to meaningfully involve parents in the children's academic development, two reported that they were uncertain. This finding reflects the difficulties evidenced in securing parent involvement in virtually all

bilingual special education programs. Thus, 100 percent of the teachers indicated that the program improved their professional development in at least four of the five areas examined; 80 percent indicated improvement in all five.

The positive attitude toward the program by the teachers was further manifested in their comments entered on the questionnaire. These included the following:

> ."The workshops were excellent! Great information was offered and implemented!"
>
> ."My students have improved greatly with the assistance of the program."
>
> ."It was nice knowing that I could go to someone from the program for help, whether it be for a student with a problem or a parent that needed help."

OBJECTIVE 7. STAFF MASTERY OF WORKSHOP CONCEPTS

In addition to assessing the impact of staff development through the measurement of teacher attitudes, evidence of the mastery and use of skills promoted at staff workshops was obtained through classroom observations by the program administrator and O.E.E. consultant.

The program objective addressed in this phase of the evaluation proposed that 100 percent of the participating teachers and paraprofessionals would demonstrate mastery of 75 percent of the skills and concepts focussed upon in workshops.

Both teachers and paraprofessionals were observed with the results recorded on separate observation records. The teacher observation record consisted of nine items which measured the use of project-developed and

-purchased supplies for the individualization of instruction, the central topic of the staff-development workshops. The paraprofessional observation record consisted of five items similar in content to the teacher record but focussed on lower-order responsiblities.

Each item was given a percentage rating from 10 to 100 indicating the level of skill demonstrated by the staff observed. To measure the objective, the observation records were used as criterion-referenced tests with each item considered a performance objective; a criterion of 70 percent was established for mastery of each objective.

Eleven teachers and three paraprofessionals were observed and scored on the appropriate observation record. Analysis of these data indicated that all of the observed staff demonstrated mastery (i.e., a rating of at least 70 percent) on every item (i.e., objective). Indeed, all three paraprofessionals were rated 100 percent on all five items.

OBJECTIVE 8 and 9. PARENT INVOLVEMENT

The program's parent involvement objectives proposed the following:

--50 percent of the parents who attend one parent workshop would attend at least one more; and

--70 percent of the parents attending workshops would demonstrate mastery of 75 percent of concepts presented.

These objectives were predicated upon the development of a series of parent workshops as the principal vehicle for parent involvement. However, the delivery of these workshops during the school year was hampered by low parent registration due to obligations imposed by work and other family responsibilities. To secure optimal involvement the medium for parent contact during the school year was refocussed from workshops to home visits

by project personnel.

Home visits were not scheduled in a formal, systematic manner. Rather, program personnel (i.e., project coordinator, teachers, family workers, and paraprofessionals) visited the homes of students as needed to remedy specific problems or according to plans personally devised by the program teachers. (See Chapter II for further description of parent-involvement activities.)

In order to fully implement the parent involvement component of the program, parent workshops were re-scheduled for the period July 6 to August 5, 1981. Program records indicated that over half of the parents who attended one workshp attended at least one additional workshop. Accordingly, the objective was attained.

It was not possible to evaluate the second parent involvement objective as this information was not reported.

IV. CONCLUSIONS AND RECOMMENDATIONS

The analyses of data from pupil achievement measures, teacher attitude and observation scales, and staff interviews and classroom observations by the O.E.E. evaluator indicated that, as reported last year, the Bronx Multi-discipline Special Education Bilingual Program continued to provide an effective and comprehensive system of educational services that benefited bilingual handicapped students in the Bronx region through direct instruction and staff development and support.

Specifically, pupil achievement data indicated that all student program objectives were attained. That is, the proposed criteria were met in mathematics, oral-English proficiency, social studies, science, and English reading. In addition, all classroom teachers manifested a positive attitude toward program services, particularly teacher training, and demonstrated proficiency in the skills and concepts focussed upon in teacher-training workshops. Extensive program-parent communication was maintained through home visits by the project coordinator, teachers, and paraprofessionals. Parent training workshops were held during the summer in order to fully implement this component.

A noteworthy achievement of this year's program cycle was the statistically significant improvement observed in oral-English proficiency measured in T units. Whereas the evaluation of English-language gains in last year's cycle, using the Basic Inventory of Natural Language (B.I.N.L.), found significant gains in complexity but not productivity, this year's evaluation witnessed significant growth in a measure comprised of both complexity and productivity. (i.e., T units). In interviews, program personnel attributed this between-

cycle variation to differences in the evaluation methodology rather than instructional techniques. The procedures employed in this year's language assessment used stimuli and contexts which were more familiar and natural to the population than those of the B.I.N.L., thereby eliciting greater responsiveness (productivity).

Observations and interviews revealed that all aspects of the program were effectively implemented as proposed. Although the population exhibited a wide range of cognitive/academic levels, program staff effectively assisted and trained the classroom teachers in the individualization of instruction to meet the heterogeneity of pupil needs. In every case the students appeared to be highly motivated and showed a positive attitude toward learning. Undoubtedly, training and assistance in diagnostic-prescriptive methods grounded in appropriate curriculum objectives and activities, contributed to the well-managed classroom atmosphere. Successful learning was evident in spite of the wide range of intellectual skills.

In addition, the program effectively drew upon a number of resources such as agencies involved in bilingual education. Classrooms were provided with the essential equipment needed to conduct a variety of motivating learning activities.

Especially noteworthy was the staff's development of a reading text, The Snow, and an original program guide covering academic areas and classroom management strategies for bilingual exceptional students. These original products represented an important contribution to the advancement of bilingual education for the handicapped.

Staff demonstrated innovativeness and firm commitment to the education of

their students by refocussing parent involvement activities from group workshops to active outreach through home visits during the school year and re-scheduling some workshops during the summer. The determination to involve and train parents augurs well for the future development of home-school continuity in the academic and social development of bilingual handicapped students.

In order to maintain and enhance the achievements of this project, the following recommendations are offered.

- .Staff development should continue to focus upon the diagnostic-prescriptive approach to the individualization of instruction using methods such as the "Workshop Way."
- .The development of bilingual special education curricula and instructional materials ought to continue, especially in reading and mathematics.
- .Staff training should include discussions on the threshold for the transition of instructional languages (i.e., Spanish and English) during literacy development. Related to this question, the problem of language assessment should continue to be confronted until an appropriate instrument or procedure is validated for use with special education students with limited English proficiency.
- .Outreach services should be systematized to assure parent involvement.